

## Change point Detection in trend of mortality DATA

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**Abstract.** Mortality refers to death that occurs within a population. It is linked to many factors such as age, sex, race, occupation and social class. Change in the pattern of mortality trend can affect the population standards of living and health care. This event makes a change point is occurred in mortality rates. The aim of this study is to detect change point in Iranian mortality data during 1970 to 2007. We use several frequencies and Bayesian methods to estimate the change point under both Poisson and poisson regression modeling for mortalities. All method show that a change has occurred in mortality rates at 1993. This result corresponds to descriptive result of Statistical Center of Iran.

**Keywords:** change point, MCMC, mortality, Poisson regression, Bayes information criterion